

ClaimsART 34 AMDT  
Sub a<sup>2</sup> 1.

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1. A peripheral consumer electronic device comprising:

- (a) means for communicating with a digital display device interconnected by a digital bus;
- (b) means for providing digital video content;
- (c) means for generating, in said peripheral device, digital OSD data representative of an on-screen display menu associated with said peripheral device, said digital data being capable of being displayed; and
- (d) means for transferring said digital video content and said digital OSD data capable of being displayed via said digital bus to said display device.

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2. The peripheral device of claim 1 wherein said transferring means comprises means for writing via said digital bus said digital data to a memory device associated with said display device;

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3. The peripheral device of claim 2 further comprising a means for navigating said menu in response to a user initiated command, said navigating means generates updated digital data in response to said user initiated command and writes said updated digital data to said memory device, said user initiated command controls operating modes of said peripheral device.

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4. The peripheral device of claim 1 further comprising a mapping means for identifying the connectivity of said peripheral device with other devices on said digital bus.

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5. The peripheral device of claim 4 further comprising means for receiving characteristic information of each device connected on said digital bus.

6. The peripheral device of claim 1 further comprising means for processing video data.

ART 34 AMDT

7. A method for controlling a peripheral consumer electronic device interconnected via an IEEE 1394 serial bus to a display device comprises:

- 5 (a) receiving, in said display device, digital video content from said peripheral device utilizing an isochronous transfer mechanism of said serial bus;
- 10 (b) generating, in said peripheral device, digital data representative of an on-screen display menu associated with said peripheral device, said digital data being capable of being displayed;
- (c) transferring said digital data via said serial bus to said display device utilizing an asynchronous transfer mechanism of said serial bus; and
- (d) combining, in said display device, said digital video content and said digital data.

15 8. The method of claim 7 further comprising the steps of:

- (a) receiving control information in response to a user initiated command, said control information controlling operating modes of said peripheral device;
- 20 (b) navigating said menu in said peripheral device in response to said control information, wherein the step of navigating comprises updating said digital data; and
- (c) transferring said updated digital data to said display device.

25 9. A method for controlling a peripheral consumer electronic device interconnected via a IEEE 1394 serial bus to a display device comprises:

- (a) mapping the connectivity of each device on said serial bus;
- (b) communicating with said display device utilizing an asynchronous transfer mechanism of said serial bus;
- 30 (c) generating, in said peripheral device, digital data representative of an on-screen display menu associated with said peripheral device; and
- (d) providing to said display device a first message indicative of the availability of said digital data, said first message comprising the location and size of said digital data in a memory device associated with said peripheral device.
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1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation  $f(x) = \int_0^x f(t) dt$ . It is shown that the function  $f(x)$  is continuous and differentiable on the interval  $[0, 1]$ . The derivative of  $f(x)$  is equal to  $f(x)$  itself. This implies that  $f(x)$  is an exponential function. The initial condition  $f(0) = 1$  determines the function uniquely as  $f(x) = e^x$ .

## A d d a' Abstract